

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: March 21, 1979

 Forwarded to:

Mr. Alan S. Boyd
 President
 National Railroad Passenger
 Corporation
 400 North Capitol Street, N.W.
 Washington, D.C. 20001

SAFETY RECOMMENDATION(S)

R-79-32 through -36

About 6:30 p.m., on June 9, 1978, northbound Conrail commuter train No. 400, consisting of four self-propelled cars, struck the rear of Amtrak train No. 60, the Montrealer, consisting of 1 locomotive unit and 14 cars, at Seabrook, Maryland. The impact caused eight cars of train No. 60 and three cars of train No. 400 to be derailed. Sixteen crewmembers and 160 passengers were injured and damage was estimated to be \$248,050. 1/

Train No. 60 received an "approach" indication at signal 128R near the Capitol Beltway Station. After stopping, the train departed from signal 128R at medium speed as authorized by the operating rules. However, the locomotive developed operating problems and the engineer called the Landover (Maryland) operator by radio to advise him that he was going to stop. As the train was slowing to a stop, it was struck in the rear by train No. 400.

Train No. 400 had received a "stop" aspect at signal 128R. About 90 seconds after the train was stopped, the aspect changed to "stop and proceed," which permitted train No. 400 to depart at restricted speed of 15 mph or less. The engineer reported that his cab signal changed from a "restricting" to an "approach" aspect about 3,168 feet north of signal 128R, and that he increased the train's speed by an undetermined rate. As train No. 400 proceeded through a 1° curve to the right, the engineer saw the rear of train No. 60 ahead. He said that he made a full service brake application and then placed the brakes in emergency. When he realized that his train was not going to stop before striking train No. 60, he moved back into the first car to warn the passengers. Several seconds later, train No. 400 struck the rear of train No. 60.

1/ For more detailed information read "Railroad Accident Report--Rear End Collision of Conrail Commuter Train No. 400 and Amtrak Passenger Train No. 60, Seabrook, Maryland, June 9, 1978" (NTSB-RAR-79-3).

Because of the engineer's warning, passengers in the forward section of the first car of No. 400 were able to brace themselves for the impact. However, the other passengers on the train had no advance warning, and they were injured when they were propelled into the unrestrained seatbacks. Some passengers struck unpadded metal border strips along the tops and sides of the seatbacks and metal ticket holders located on the top of the seatbacks. The Safety Board concluded that if the commuter cars on train No. 400 had been designed to eliminate injury-producing interior features, the number of injuries resulting from the collision would have been greatly reduced.

On Amtrak's Northeast Corridor, Conrail employees operate Amtrak passenger trains, Conrail freight trains, and Conrail commuter trains. This division of responsibility creates a problem of insuring that crewmembers are properly qualified on the equipment to be operated. Amtrak accepts a Conrail employee as being qualified by the very act of reporting for an Amtrak assignment. In addition, Conrail does not monitor crewmembers for type of service on the Northeast Corridor because Conrail is not responsible for train operation. Because this investigation revealed that the engineer used the brakes improperly and the crewmembers lacked knowledge of emergency procedures, the Safety Board believes that Amtrak should accept responsibility for training and qualifying crewmembers who operate Amtrak passenger trains.

Train No. 60 was scheduled to depart Washington 5 minutes ahead of train No. 400. On the day of the accident, train No. 60 departed only 4 minutes ahead of train No. 400. Though train No. 60 was scheduled to stop at the Capital Beltway Station, train No. 400 was not scheduled to stop until Seabrook, 1.3 miles beyond. Therefore, train No. 400 consistently operated on restrictive signal indications, especially through the accident area. The engineer of train No. 400 probably was expecting an "approach" aspect on the cab signal equipment as he advanced beyond signal 128R, because train No. 60 usually had exited the signal block by this time. This aspect told the engineer that the signal block to Seabrook was clear and that he could move forward to make his station stop without interference. Since this was a daily practice, the engineer was used to progressing unimpeded to the station. On the day of the accident, the engineer of train No. 400 stated that he received an "approach" aspect on the cab signal before accelerating his train for the run to the Seabrook Station. A "restricting" cab signal aspect should be displayed when another train is in the same block.

Emergency personnel were unable to open the center side doors of train No. 400 from the outside of the car because no means of operating the doors on the outside had been provided. They were also unable to open the center side doors from the inside because the cabinet containing the operating mechanism was unmarked and they were unfamiliar with this equipment. Amtrak and Conrail had not provided training and familiarization for railroad emergencies to local rescue organizations.

Passengers of both trains had little or no guidance in evacuating the trains and obtaining medical assistance. The conductor of train No. 400 did not know how to manually open the center side door, so many of the passengers had to be removed through the windows. Unaware of prescribed emergency procedures, crewmembers did little to help injured passengers. Passengers left the cars on their own initiative or at the direction of rescue personnel. Train crewmembers had not been given any formal training in the care of passengers in an emergency or derailment.

Therefore, the National Transportation Safety Board recommends that the National Railroad Passenger Corporation (Amtrak):

Restrict the NJ DOT commuter car from use on the northeast corridor until the interiors of the cars are altered to correct the injury-producing features of the car design. (Class II, Priority Action)(R-79-32)

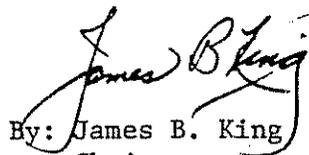
Accept the responsibility for training and qualifying train crewmembers operating trains over territory of the National Railroad Passenger Corporation. Require crewmembers operating on the mainline in passenger, freight, and commuter service to be certified by Amtrak as to types of service for which crewmembers are qualified. (Class II, Priority Action)(R-79-33)

Establish train spacing so a following train will not be scheduled to operate on repetitive restrictive signals. Consideration should be given to departure time, train speeds, and station stops to avoid having following trains overtake and closely follow preceding trains. (Class II, Priority Action)(R-79-34)

Arrange for a program along passenger train routes for training and familiarizing emergency rescue organizations in the type of train equipment being used. (Class II, Priority Action)(R-79-35)

Establish a program to train crewmembers in the proper procedures for care of passengers in derailment and emergency situations. (Class II, Priority Action)(R-79-36)

K NG, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members, concurred in the above recommendations.


By: James B. King
Chairman